International Seabed Authority ISBA/17/LTC/L.3/Rev.1

Legal and Technical Commission

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Summary of environmental work carried out by contractors

I. Introduction

1. At its 2010 meeting, the Legal and Technical Commission was provided with a preliminary analysis of the environmental work reported to have been carried out by each contractor with the International Seabed Authority. Following consideration of the preliminary analysis, the Commission requested the secretariat to perform a more detailed analysis in order to assess the extent to which each contractor had satisfied the requirements of regulation 31 of the Regulations on Prospecting and Exploration of Polymetallic Nodules in the Area (ISBA/6/A/18) ("the regulations") and the associated recommendations for the guidance of the contractors for the assessment of the possible environmental impacts arising from exploration for polymetallic nodules in the Area, issued by the Commission in 2001 (ISBA/7/LTC/1/Rev.1).

2. The analysis was performed by individually examining each annual report submitted by each contractor to determine how performance varied from year to year. Additionally, all of the reports from each contractor were analysed together to determine overall performance. The present document provides a brief summary of the complete analysis. The full analysis of the work carried out by each contractor is contained in document ISBA/17/LTC/CRP.1.

II. Environmental recommendations

3. It will be recalled that the regulations require the Authority to establish and keep under periodic review environmental rules, regulations and procedures to ensure effective protection for the marine environment from harmful effects that may arise from activities in the Area. They also provide that every contract for exploration for polymetallic nodules shall require the contractor to gather environmental baseline data and to establish environmental baselines against which to assess the likely effects of its programme of activities under the plan of work for exploration on the marine environment, and a programme to monitor and report on such effects.

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4. Additionally, the contractor shall cooperate with the Authority and the sponsoring State or States in the establishment and implementation of such monitoring programmes, and report annually on the results of its environmental monitoring programmes. When applying for approval of a plan of work for exploration, each applicant is required to provide, inter alia, a description of a programme for oceanographic and environmental baseline studies in accordance with the regulations and any environmental rules, regulations and procedures established by the Authority that would enable an assessment of the potential environmental impact of the proposed exploration activities, taking into account any recommendations issued by the Commission, as well as a preliminary assessment of the possible impact of the proposed exploration activities on the marine environment.

5. Pursuant to the regulations, the Commission may from time to time issue recommendations of a technical or administrative nature for the guidance of contractors to assist them in the implementation of the rules, regulations and procedures of the Authority. A set of recommendations for the guidance of the contractors for the assessment of the possible environmental impacts arising from exploration for polymetallic nodules in the Area was issued by the Commission in 2001 (see ISBA/7/LTC/1/Rev.1).

6. The 2001 recommendations describe the procedures to be followed in the acquisition of baseline data and the monitoring to be performed during and after any activities in the exploration area with potential to cause serious harm to the environment. The recommendations were developed to:

(a) Define the biological, chemical, geological and physical components to be measured and the procedures to be followed by contractors to ensure effective protection for the marine environment from any harmful effects that may result from the contractors' activities in the Area;

(b) Facilitate reporting by contractors; and

(c) Provide guidance to potential contractors in preparing a plan of work for exploration for polymetallic nodules in conformity with the provisions of the Convention, the 1994 Agreement relating to the implementation of Part XI of the United Nations Convention on the Law of the Sea, and the regulations.

III. Methodology for analysis

7. The objective of the analysis carried out by the secretariat was to assess how closely contractors met the provisions of regulation 31 of the regulations and the recommendations for guidance. It should be noted that neither the present document nor the full analysis contained in ISBA/17/LTC/CRP.1 aims to provide a scientific analysis of the results of the environmental work carried out by the contractors.

8. In summary, the environmental recommendations issued by the Commission were divided into a series of discrete requirements. The annual reports submitted by each of the contractors were then evaluated and assessed by a quantitative method to determine how well (or otherwise) the contractors had performed in carrying out their environmental activities. A grading system (A [best] to I [worst]) was then developed to evaluate their performance against the requirements set out in the environmental recommendations. Each grade was associated with a numerical score

so that each contractor could be given an overall score. The highest grading can only be reached if an annotated description is provided with the raw data and if supporting graphic material is provided.

9. Contractors were evaluated at levels A and B if they had provided raw data that could be used by the Authority for the purposes of environmental assessment and protection; levels C to E if they provided data or analysis that could be useful for regional environmental protection; and levels F to I if there were components within the environmental guidelines that had either not been evaluated or where the information collected was of little or no use for environmental assessment by the Authority.

IV. Summary of the results of the analysis

10. Contractors spent $50 million on environmental activities out of a total of $351 million set aside for exploration activities. That figure may in fact be higher, as some of the financial statements submitted to the Authority did not contain separate sections highlighting environmental expenditures. At the time of preparing the present report, the 2005 annual report for Yuzhmorgeologiya was not available and as such the analyses do not include an assessment of that report.

11. A summary table showing the performance of individual contractors since signing their contracts and the results of the evaluation of their 2010 annual reports is contained in the annex to the present document. It may be noted that there is a large variation in the quality and quantity of environmental work being carried out by contractors. Nevertheless, all contractors have tended to perform better against the recommendations than in previous years. The Government of the Republic of Korea obtained a significantly higher environmental score than other contractors, both in 2010 and over the whole assessment period.

V. Review of environmental activities of contractors

A. ChinaOcean Mineral Resources Research and Development Association (COMRA)

12. In total, COMRA spent approximately $4.5 million on environmental work, representing 11 per cent of the $40.5 million disbursed on commercial activities. The average environmental score obtained by COMRA was 0.73. It was not possible to discern any clear positive or negative trends since its performance had been variable from year to year. The contractor had not provided any raw data, although 13 per cent of the information requested by the Commission was provided at level E or above and may be classified as "potentially useful". The best performance was in the areas of chemical oceanography and bioturbation, but improvements were needed in sediment properties and biology. COMRA was the only contractor to have provided information on all data categories.

B. Deep Ocean Resources Development Co. Ltd.

13. With the exception of its 2001 report, when it provided some general information (evaluated at level E) on the oceanographic conditions of its claim area, the contractor had not carried out any environmental activities. However, as an annex to the 2010 report, a summary of the environmental work carried out by the Mineral Mining Agency of Japan and the Deep Ocean Resources Development Co. Ltd. between 1989 and 1996 was presented. While that report provided information on the environment, it is not included in the analysis as it was a summary of work carried out prior to the signing of the exploration licence. The only report that contained environmental expenditure was that submitted in 2010, when the contractor stated that $14,762 had been spent on environmental activities, accounting for 73 per cent of that year's expenditure. Total expenditure by the contractor at the time of preparing the present report was $189,500.

C. Federal Institute for Geosciences and Natural Resources

14. In 2006, the Federal Institute for Geosciences and Natural Resources (Germany) signed its contract with the Authority. That year, expenditure on environmental studies was reported as €28,872, which accounted for 28 per cent of total expenditure. In the reports for other years, environmental expenditure was not reported separately to other expenditure. At the time of preparing the present report, however, the Institute had reported total expenditure of €10 million on exploration activities.

15. The average environmental result obtained by the Institute was 0.45. Its performance had been improving in previous years, with a maximum result of 1.35 being obtained for the 2010 report. The contractor provided raw data for the assessment of current and temperature field structures in the 2009 annual report, evaluated at level B, but that was the only raw data provided. A total of 9 per cent of the information requested by the Commission was assessed as level E or above and therefore classified as "potentially useful". The best information provided by the Institute was on chemical oceanography and sediment properties (those being the only categories at level E or above). No information was provided on bioturbation or sedimentation. Overall, the baseline studies carried out by the Institute were evaluated at level F.

D. Government of India

16. The Government of India signed an exploration contract with the Authority in 2002. Prior to the 2005 annual report, the contractor did not separate environmental expenditure from total expenditure, and at the time of preparing the present report, a financial breakdown for work carried out in 2010 was not available (although total expenditure for 2010 was provided). In reports where environmental expenditure was separated from other expenditure, a total of $10.4 million had been attributed to environmental work, which accounted for 13.8 per cent of total expenditure over the same period. Reported total expenditure on exploration activities at the time of preparing the present report, including the sums listed in the 2010 report, amount to $187 million.

17. The average environmental score obtained by the Government of India was 0.77. Its performance had been consistent from year to year. With the exception of macrofaunal abundance in the 2004 annual report, evaluated at level B, the Government of India had not provided any raw data at the time of preparing the present report. A total of 13 per cent of the information requested by the Commission had been provided at level E or above and was therefore classified as "potentially useful". The information provided on sediment properties had been the best quality data provided by the contractor, with biological studies being the only other category to have been assessed at level E or above. The contractor had yet to provide any data on sedimentation. Overall, the baseline studies carried out by the Government of India were evaluated at level F.

E. Institut français de recherche pour l'exploitation de la mer

18. The Institut français de recherche pour l'exploitation de la mer (Ifremer) has spent a total of €3.7 million on polymetallic nodules exploration activities. Environmental expenditure was reported separately from total expenditure only in the 2009 and 2010 annual reports, where it accounted for 52 per cent of total expenditure at an amount of €160,676.

19. The average environmental score for Ifremer was 0.26. Only 5 per cent of the information requested by the Commission was provided at level E or above and was therefore classified as "potentially useful". The contractor was evaluated at level F for the data it provided on biological communities and sediment properties, but provided no information on sedimentation. Overall, the baseline studies carried out by Ifremer were evaluated at level G.

F. Interoceanmetal Joint Organization

20. The Interoceanmetal Joint Organization (IOM) reported spending $890,000 (9.5 per cent) on environmental activities out of a total exploration expenditure of $9.3 million. The average environmental score was 0.70. No trend could be discerned as to whether its overall performance had either improved or declined. About 3 per cent of the information requested by the Commission had been submitted as raw data (level B), with an additional 9 per cent being classed as "potentially useful", meaning that 12 per cent of total data was provided at level E or above. The best information provided by the contractor was on sediment properties and therefore attributed an average B. At the time of preparing the present report, IOM had not provided any information on bioturbation or sedimentation. Overall, the baseline studies carried out by IOM obtained were evaluated at level F.

G. Government of the Republic of Korea

21. The Government of the Republic of Korea reported expenditures of $30.5 million on environmental work. That represented 58 per cent of its total expenditure of $52.8 million. The average environmental score was 2.38, with performance improving each year, leading to a maximum score of 3.17 in 2010. Almost 6 per cent of the requested data was provided at level A. An additional 13 per cent of the data was evaluated at level B. In total, 43 per cent of the data

requested by the Commission was assessed at level E or above, meaning that it was considered to be "useful" or "potentially useful" data. The data categories where the contractor performed least well were biological communities and physical oceanography, leading to an average evaluation level of E. Overall, the baseline requirements carried out by the Government of the Republic of Korea were evaluated at level D.

H. Yuzhmorgeologiya

22. The 2005 report of Yuzhmorgeologiya was not available at the time of preparing the present review. Furthermore, it had not been possible to distinguish between environmental expenditure and other exploration expenditures in every report submitted. However, in the six out of the nine available annual reports where costs had been separated, environmental expenditure amount to $3 million, which accounted for about 15 per cent of the total expenditure listed in the same reports. Total expenditure listed in all of the available reports was $37.3 million.

23. The average environmental score of Yuzhmorgeologiya was 1.85 and its highest score of 2.27 was in 2010, reflecting a steady improvement in recent years. When all available reports were examined, 4 per cent of the required information was provided at levels A or B and a further 13 per cent of the data at levels C to E. The best information provided by the contractor, evaluated at level D, was on biological communities and sediment properties, but it had not provided any information on bioturbation or sedimentation. Overall, the baseline studies carried out by Yuzhmorgeologiya were assessed at level D.

VI. Recommendation

24. The Commission is invited to consider the analysis containcd in ISBA/17/LTC/CRP.1 and summarized in this document and to provide such guidance and direction as may be necessary in order to increase the volume and quality of data that is available for use in the protection of the environment during activities associated with polymetallic nodule exploration and future exploitation.

Annex

Numerical environmental score and associated evaluation level for each contractor in 2010 and a comparison of this to average performance

Contractor	*Average*		*2010*	
	Score	*Level*	*Score*	*Level*
ChinaOcean Mineral Resources Research and Development Association	0.73	H	0.74	H
Deep Ocean Resources Development Co. Ltd.	0.01	I	0	I
Federal Institute for Geosciences and Natural Resources	0.45	I	1.35	H
Government of India	0.77	H	0.67	H
Institut français de recherche pour l'exploitation de la mer	0.26	I	0.18	I
Interoceanmetal Joint Organization	0.70	H	0.34	I
Government of the Republic of Korea	2.38	G	3.17	F
Yuzhmorgeologiya	1.10	H	2.27	F
Average of all contractors	**0.80**	**H**	**1.09**	**H**

Note: The average level includes assessment of baseline studies, environmental impact assessment and data reporting. Full details about the evaluation methodology is provided in ISBA/17/LTC/CRP.1.